Systems Analysis, Design & Testing Project

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Typical Scenarios

Use Case name: Log In and Check Ticket Balance	Unique ID: UC-001
Area: Arcade Ticketing System	
Actor(s): Primary: Customer (Player) Secondary: Authentication System, Database Server	
Description: Customer logs into the system via kiosk or app to view their ticket balance.	
Triggering Event: Customer initiates login from the interface	
Trigger Type: External	
Steps Performed (Main Path)	**Information for Steps**
1. Customer selects the login option.	LoginScreen
2. System prompts for credentials or registration.	AccountAccess
3. Customer enters credentials or creates a new account	AuthenticationSystem
4. System verifies access and shows current ticket balance	UserDashboard , TicketDatabase

	UI_Display
5. Ticket balance displayed to user.	

Preconditions: Customer has an account or access to register

Postconditions: Customer is logged in and ticket balance is visible

Assumptions: Network and system access is available

Requirements met:
Customer can securely log in.
Customer can view their current ticket total.

Outstanding issues: None

Priority: High

Risk: Low

Use Case name: Play Game and Receive Tickets	**Unique ID:** UC-002
Area: Arcade Ticketing System	
Actor(s): Primary: Customer (Player) Secondary: Game Machine, Ticket Calculation Engine	
Description: Customer plays a game, and based on performance, receives digital tickets.	

Triggering Event: Game ends and score is calculated	
Trigger Type: Internal	
Steps Performed (Main Path)	**Information for Steps**
1. Customer plays an arcade game.	GameMachineInterface
2. Game finishes and score is recorded.	ScoreTracking
3. System calculates ticket reward. Includes: Receive digital tickets.	TicketCalculation
4. Tickets are added to the customers account or QR/ smart card.	DigitalWallet , UserAcc
5. Updated balance displayed to player.	GameDisplay

Preconditions: Customer is logged in or has a scannable card.

Postconditions: Digital tickets are stored in the system.

Assumptions: Game machine is properly integrated.

Requirements met:
Customer automatically receives tickets for their score.
Customer's account updates instantly after gameplay.

Outstanding issues: None

Priority: High

Risk: Medium

Use Case name: Redeem tickets for prizes.	Unique ID: UC-003
Area: Arcade Ticketing System	
Actor(s): Primary: Customer (Player) Secondary: Kiosk Interface, Redemption Processor, Staff (when manual)	
Description: Customer uses their digital tickets to redeem a prize at a kiosk or counter	
Triggering Event: Customer initiates ticket redemption	
Trigger Type: External	

Steps Performed (Main Path)	Information for Steps
1. Customer logs in or scans QR code at kiosk	RedemptionKiosk
2. Customer selects a prize to redeem	PrizeCatalogue
3. System validates ticket authenticity. Includes: validate tickets.	TicketValidation , UserAcc
4. Tickets are deducted and prize is dispensed.	RedemptionProcessor , DigitalWallet

Preconditions: Customer has enough valid tickets	
Postconditions: Prize redeemed; balance updated	
Assumptions: Staff or kiosk is online and operational	
Requirements met:	

Customer can securely redeem prizes.

System ensures only valid tickets are used.

Customer receives confirmation of redemption.

Outstanding issues: None

Priority: High

Risk: Medium

Use Case name: Generate usage reports	**Unique ID:** UC-004
Area: Arcade Ticketing System	
Actor(s): Primary: Staff Secondary: Report Generator, Analytics Dashboard, Database	
Description: Staff monitors activity and generates reports on usage, ticket flow, and peak hours.	
Triggering Event: Staff selects reporting option	
Trigger Type: External	
Steps Performed (Main Path)	**Information for Steps**

1. Staff logs into system dashboard	AdminPortal
2. Staff selects "Monitor Usage" panel	SystemMonitor
3. System displays real-time machine and ticket data	AnalyticsDashboard
4. Staff clicks "Generate Report". Extends: Monitor System Usage	GenerateReport
5. System compiles report and allows to export.	FileExport

Preconditions: Staff account exists with reporting permissions

Postconditions: Report is generated and optionally exported

Assumptions: Sufficient usage data is stored

Requirements met:

Staff can view real-time analytics.

Staff can generate and export system usage reports.

Outstanding issues: None

Priority: Medium

Risk: Low

Use Case name: Manage security and system settings	Unique ID: UC-005

Area: Arcade Ticketing System

Actor(s):
Primary: Admin/ System Operators
Secondary: Configuration Logger, Audit Log System

Description: Admin checks logs, verifies security, and adjusts system settings as needed.

Triggering Event: Admin accesses system backend

Trigger Type: External

Steps Performed (Main Path)	Information for Steps
1. Admin logs into backend panel	AdminCtrl
2. Admin views security and transaction logs	AuditLog
3. Admin adjusts settings or flags suspicious activity	SystemConfigMan
4. System saves and applies security changes	ConfigurationLog , ConfirmModule

Preconditions: Admin has valid credentials

Postconditions: System settings updated securely

Assumptions: Logs and audit trial are available

Requirements met:
Admin can monitor system security and logs.
Admin can update settings and have changes recorded for auditing.

Outstanding issues: None

Priority: High

Risk: Medium